



Fig. 6. Instantaneous centroid velocity and track curvature are plotted for the entire 600 s of drug exposure. The data at every second are obtained by averaging the velocity or curvature values for all the worms exposed to a certain drug combination. (A) The winning combination, T3 of the fourth iteration, has minimal velocity ( $<10$  mm/s) and large curvature ( $>50$  mm $^{-1}$ ) throughout the 600 s. (B and C) These combinations show medium velocity (50 to 100 mm/s) and curvature (25 to 50 mm $^{-1}$ ), suggesting that the compounds affect the worms, but better alternatives are still possible. (D to F) These combinations exhibit high velocity ( $>100$  mm/s) and low curvature ( $<25$  mm $^{-1}$ ), indicating that the drugs have a negligible effect on worm movement within the observed time period.